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**Before the
Federal Communications Commission
Washington, D. C. 20554**

In the Matter of)
)
Allocation of Spectrum Below) ET Docket No. 94-32
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To: Mr. William F. Caton
Acting Secretary
Federal Communications Commission
Washington D.C. 20554

**Reply Comments of
The San Bernardino Microwave Society
In Response to FCC NPRM 94-32**

From: Bill Burns,
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January 04, 1995

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Reply Comments of
The San Bernardino Microwave Society
In Response to FCC NPRM 94-32

By the Membership:

Introduction

In its comments dated December 15, 1994, the San Bernardino Microwave Society (SBMS) made a number of statements relative to the Federal Communications Commission (FCC) NPRM 94-32. The SBMS membership felt that these statements were important for the FCC to consider as it determines how to allocate usage of spectrum which lies within the 13 cm Amateur band. These statements are briefly reviewed here to assist the reader in understanding the importance that we place on each.

- 1.) Members of the SBMS have been continuously active in the 13 cm band since 1955, with founding members active for a decade prior to 1955.
- 2.) The Amateur radio community has been the source of many of the technical advancements, some of which are included in the proposed new commercial and private uses of the 13 cm band.
- 3.) Amateur radio is prohibited from profiting from its activities, and this equates directly to the greatest public benefit of all: Community services provided by radio Amateurs do not cost the American People anything!
- 4.) The NTIA did not (adequately) attempt to determine the amount and type of Amateur useages within the 13 cm band. Therefore, there is no mechanism in place to gauge the severity of disruption to the Amateur service caused by the addition of new services within the 13 cm band.
- 5.) Since reallocation of spectrum away from the Amateur service is an **excessive disruption to the Amateur service**, the FCC should identify equivalent replacement spectrum before reallocation, or upgrade the Amateur status to "primary" within the band.

6.) None of the proposed service providers (except In-Flight-Phone) who would like to share portions of the 13 cm band have addressed technical issues relevant to sharing. In their comments, these proposed service providers have evaded the hard technical facts by which any judgment of potential sharing possibility could be made.

7.) The SBMS wishes to participate in any further process which affects the future of the Amateur 13 cm band.

Additionally, the SBMS is compelled to reply to comments made by other organizations whose ideology falls on either side of these issues. The American Radio Relay League (ARRL), in its comments filed on December 19, 1994, thoroughly covers the Amateur radio perspective. The ARRL comments cut directly to the core of the problems associated with the procedures used by the NTIA in its initial analysis of the Amateur activity in the 13 cm band. The ARRL comments correctly conclude that the process of spectrum reallocation to any service other than the Amateur service can not continue until the clear intent of the Omnibus Reconciliation Act of 1993 is met.

Other Amateur organizations engaged in frequency coordination and spectrum usage issues, like the Amateur Radio Council of Arizona, Northern Amateur Relay Council of California and the Southern California Repeater and Remote Base Association (SCRRBA), comment primarily on the impact reallocation has on widespread Amateur use of the 13 cm band. In its comments and reply comments filed to the NOI for docket 94-32, SCRRBA, as well as the other Amateur frequency coordinators, supplied hard technical information by which the many uses of the 13 cm band could be effectively evaluated.

In comments filed to the NPRM for docket 94-32, SCRRBA at 5 states: "No definitive mode, bandwidth, power or operational characteristics have been supplied by most of the commenters. This prevents meaningful interference analyses." The purpose of these coordinating bodies is to insure that technically compatible communications modes share (or are kept in separate) portions of the available spectrum. They are the best resource for the Amateur community to depend upon when determining services which could share the Amateur 13 cm spectrum. These coordinating groups have unanimously stated that they do not have enough information by which to effectively judge potential band sharing partners. Those new services who wish to share portions of the 13 cm band with the Amateur community have not been responsive to the requests of the FCC in supplying technical information by which compatibility with the Amateur service could be evaluated.

In general, the part 15 users who share portions of the Amateur 13 cm band comment on the disruption to their systems that will be caused by reallocation of spectrum to other than Amateur services. In its comments filed to NPRM docket 94-32, The Part 15 Coalition at 1 "supports retaining the use of this band by part 15 equipment and opposes auctioning this band for licensed or unlicensed services". IBM, in its comments filed to

this same proceeding states at 1 "... and allocate the 2,402 to 2,417 MHz band to its existing part 15 and other incumbent uses". We certainly could not agree more!

The Part 15 Coalition has apparently overlooked one potential source of support for its position. The Amateur community has shared spectrum with the part 15 users in the 13 cm band since part 15 was allocated into the band. This sharing presents a symbiotic relationship between the Amateur users and the part 15 users in the 13 cm band. While we are not aware of any interference problems which currently come from the part 15 service, as more of the devices become active in the band the **potential for interference will increase dramatically**. To place additional services in the band will only compound this situation.

One of the proposed new services for vying for reallocation spectrum is the "wireless local loop" service proposed by a number of regional telephone companies. While on the surface this might seem to be just as viable as the other new so-called "emerging" technologies, this particular application of spectrum raises an obvious question; Why wireless local loop? The philosophy of the FCC for many years has been that two-way communications between fixed stations in crowded radio frequency bands was prohibited. The obvious exceptions are point-to-point control links, point-to-point multiplex microwave and point-to-multipoint automated systems, which are carefully separated from mobile services. The reasoning behind this philosophy is to keep the congested airways clear of traffic which could be otherwise handled via non-radio channels (like wireline telephone). This keeps the airways clear and available for communications from less robust sources like mobile or portable stations.

The metallic "drop wire" used in providing telephone service to most households in America is in the process of being replaced by "fiber-optic" systems in a number of urban areas. In some areas, there is a race occurring between the various utilities, all of which could deliver fiber-optic based services to their customers (utilities like water, electric, gas/oil, steam, cable TV and telephone). When the radio spectrum in a particular urban area is filled, there is no other way to re-use this precious resource. With a fiber-optic-based system, the resource can be renewed by adding more fibers to the system providing an entirely new and independent spectrum to fill.

The proposed use of wireless local loop in the 13 cm band is strictly an economic decision by the telephone utilities. If there is truly a need for this type of service, it should be done in the higher microwave frequencies where the radio spectrum is not so densely populated and in such high demand. Special circumstances such as historical facilities should be handled on a case-by-case basis, but are in all probability capable of being accommodated under the current part 15 allocations.

Another benefit of using the higher microwave frequencies (such as the millimeter wavelength bands) would be the increased capability and services offered to the customers, a benefit which could not be realized within the limited radio spectrum which the regional telephone companies are currently targeting. An even higher level of service

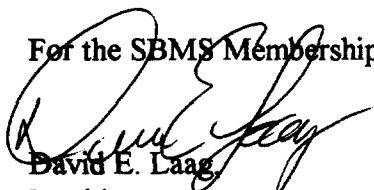
would be available to customers by using the fiber-optic direct-wired service being constructed in many markets.

We therefore find the wireless local loop system proposed by the telephone utilities to be contrary to the public interest. In all cases, the public would be better served by simply having a fiber-optic cable from their local vendor (or vendors) brought into their house to provide telephone and related services, sparing the crowded radio frequency spectrum of one more occupant. In a time where focus is being placed on emerging technologies, the limitations of the system proposed for wireless local loop seem to be rooted in patching up the "old system" without making any substantial improvement to it.

The FCC has received numerous requests for other uses of the 13 cm band. Most have not supplied sufficient information to assess their technical compatibility and their real value to the American People. We therefore reserve any further comment on these systems.

Conclusion - The San Bernardino Microwave Society appreciates the effort made by the Federal Communications Commission and sincerely thanks them for identifying the concerns of the Amateur community. We depend heavily upon the FCC to recognize the value of Amateur activity, particularly in the 13 cm band, and recognize our continued efforts over the years with a re-affirmation of our position within the 13 cm band. We therefore respectfully ask that the FCC discontinue entertaining new commercial or private uses of the 13 cm band and elevate the Amateur radio status within the band to primary.

For the SBMS Membership



David E. Laag
President